

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently amended): An optical disk apparatus, comprising:
2 an optical pickup configured to irradiate an optical disk with a beam, to receive
3 light reflected from the optical disk, and to convert the reflected light into an electrical signal;
4 a signal processing component ~~processor~~ including:
5 a reproduction system circuitry configured to generate a reproduction
6 signal used in restarting recording of the optical disk after an interruption, based on the
7 electrical signal from the optical pickup and setting values;
8 [[a]] speed information detection circuitry configured to detect speed
9 information before or after an interruption of a recording on the optical disk based on the
10 electrical signal from the optical pickup; and
11 [[a]] position detection circuitry ~~unit~~ configured to detect a recording
12 restart position and a current position of the optical disk;
13 an accessing unit configured to control the optical pickup to access the optical
14 disk at the recording restart position from the current position of the optical disk; and
15 a setting unit configured to set in the reproduction system circuitry setting values
16 based on the detected speed information, the setting values being used by the reproduction
17 system circuitry to generate the reproduction signal,
18 wherein the reproduction system circuitry comprises:
19 an equalizer circuit configured to extract an information signal of the
20 optical disk from the electrical signal sent from the optical pickup so as to perform a
21 waveform equalization and a group delay smoothing of an EFM signal;
22 an HPF circuit configured to suppress a fluctuation in binary voltage level
23 of the EFM signal when a scratch passes;

24 a binarization circuit configured to binarize the signal sent from the HPF
25 circuit; a PLL circuit configured to generate a synchronizing clock from the binarized
26 signal;

27 a demodulation circuit configured to convert information written on the
28 optical disk into a digital data string by using the binarized signal and the synchronizing
29 clock; and

30 a scratch zone detection circuit configured to generate scratch zone
31 information by using the information signal of the optical disk obtained by the optical
32 pickup.

33 wherein the setting values comprise at least one of frequency characteristics of the
34 equalizer circuit and the HPF circuit, response characteristics of the binarization circuit, gains of
35 the PLL circuit and the servo circuit, or a time constant of the scratch zone detection circuit.

1 2. (Original): The optical disk apparatus according to claim 1 wherein a
2 recording restart speed for restarting recording is the detected speed from the speed information
3 detection circuit.

1 3. (Original): The optical disk apparatus according to claim 1 wherein the
2 recording restart position on the optical disk is the position on which recording occurred before
3 the interruption at an interrupted position on the optical disk.

4-5. (Canceled)

1 6. (Original): The optical disk apparatus according to claim 1, wherein the
2 speed information detection circuit comprises a wobble signal detection circuit configured to
3 detect a wobble signal and a wobble cycle measurement circuit configured to measure a carrier
4 frequency of the detected wobble signal.

1 7. (Original): The optical disk apparatus according to claim 1, wherein the
2 speed information detection circuit comprises a wobble signal detection circuit configured to
3 detect a wobble signal and an ATIP cycle detection circuit configured to detect from the detected
4 wobble signal a cycle from which ATIP address information is obtained.

1 8. (Original): The optical disk apparatus according to claim 1, wherein the
2 speed information detection circuit comprises a recording synchronizing clock generation circuit
3 configured to generate a recording synchronizing clock in response to a recording speed, and a
4 clock cycle detection circuit configured to detect a cycle of the recording synchronizing clock
5 generated by the recording synchronizing clock generation circuit.

1 9. (Original): The optical disk apparatus according to claim 1, further
2 comprising a memory for storing recording speed information sent from the speed information
3 detection circuit, wherein, if there is a recording interruption request, speed information before
4 the recording interruption request, which is stored in the memory, is read out.

1 10. (Original): The optical disk apparatus according to claim 1, further
2 comprising a memory for storing recording speed information sent from the speed information
3 detection circuit, wherein, if there is a recording interruption request, speed information of a
4 sector which is a predetermined number of sectors short of the recording interruption request is
5 read out from the memory.

1 11. (Original): The optical disk apparatus according to claim 1, wherein the
2 speed information detection circuit detects speed information during a period ranging from after
3 a recording interruption request to when the optical pickup starts accessing the sector before the
4 interrupted position.

1 12. (Original): The optical disk apparatus according to claim 1, wherein the
2 speed information detection circuit detects speed information after the optical pickup accesses to
3 and lands on the sector before the interrupted position subsequent to a recording interruption
4 request.

1 13. (Original): The optical disk apparatus according to claim 1, wherein the
2 speed information detection circuit comprises a wobble detection circuit configured to extract a
3 wobble signal, and a wobble cycle detection circuit configured to measure a carrier frequency of
4 the wobble signal detected by the wobble detection circuit and detect speed information before or
5 after an interruption of the recording on the optical disk; and wherein the position detection unit
6 comprises an ATIP detection circuit configured to detect a current position which is used for
7 accessing a sector before a position of the recording interruption after a recording interruption
8 from ATIP address information indicating absolute time information of the disk based on the
9 wobble signal obtained from the wobble detection circuit.

1 14. (Original): The optical disk apparatus according to claim 13, further
2 comprising a memory for storing recording speed information obtained by one of the wobble
3 cycle detection circuit and the ATIP cycle detection circuit, wherein, if there is a recording
4 interruption request, speed information before the recording interruption request, which is stored
5 in the memory, is read out.

1 15. (Original): The optical disk apparatus according to claim 1, wherein the
2 speed information detection circuit comprises a wobble signal detection circuit configured to
3 detect a wobble signal, and an ATIP cycle detection circuit configured to detect a cycle at which
4 ATIP address information is obtained from the detected wobble signal to detect speed
5 information before or after an interruption of the recording on the optical disk; and wherein the
6 position detection unit comprises an ATIP detection circuit configured to detect a current
7 position which is used for accessing a sector before a position of a recording interruption after

- 8 the recording interruption from ATIP address information indicating absolute time information
- 9 of the disk based on the wobble signal obtained from the wobble detection circuit.

16-21. (Canceled)